Amendment to the Claims

In the Claims:

Please cancel Claims 2, 13-29, 34, 35, 38-41, 43, 46, and 48-58.

Please amend Claims 1, 3, 4, 8, 9, 30, 42, 44, 45, and 47; and add new Claims 59 and 60, as follows:

1. (Currently Amended) Apparatus for illuminating a portion of a body lumen to which a photoreactive agent has been or will be administered, comprising:

(a) an elongate, flexible body having a proximal end, a distal end, and at least one lumen extending therebetween;

(b) a light source array having a proximal end and a distal end, the light source array emitting light directed toward the distal end of the elongate, flexible body, said light having a characteristic emission waveband, where the characteristic emission band corresponds to a characteristic absorption waveband of the photoreactive agent, the light source array being disposed adjacent to the distal end of the elongate, flexible body;

(c) an electrical lead having a proximal end adapted to be electrically coupled to an external power supply, and a distal end electrically coupled to the light source array, thereby enabling the light source array to be energized with an electrical current when the proximal end of the electrical lead is electrically coupled to the external power supply; [[and]]

(d) a light diffusing element having a proximal end and a distal end, the proximal end of the light diffusing element being oriented in a facing relationship with the distal end of the light source array, such that light emitted from the light source array is diffused and directed outwardly away from the light diffusing element; and

(e) an optical fiber having a proximal end, and a distal end, the proximal end of the optical fiber facing toward the distal end of the light source array, and the distal end of the optical fiber directing light from the light source array to the light diffusing element.

2. (Canceled)

3. (Currently Amended) The apparatus of ~~Claim 2~~ Claim 1, wherein the optical fiber is tapered, such that the distal end of the optical fiber has a smaller cross-section than the proximal end of the optical fiber.

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4. (Currently Amended) The apparatus of ~~Claim 2~~ Claim 1, wherein the optical fiber comprises a bundle of optical fibers.

5. (Original) The apparatus of Claim 1, further comprising an optical element having a proximal side and a distal side, the proximal side of the optical element facing toward the distal end of the light source array, and the optical element focusing light emitted from the light source array.

6. (Original) The apparatus of Claim 1, wherein the light diffusing element is generally cylindrical.

7. (Original) The apparatus of Claim 1, wherein the light diffusing element comprises a plurality of light diffusing members.

8. (Currently Amended) The apparatus of Claim 1, wherein the light source array comprises a ~~pluralityof~~ plurality of light emitting devices and conductive traces electrically coupling the plurality of light emitting devices to the electrical lead, thereby enabling the light emitting devices to be energized with the electrical current from an external power source.

9. (Currently Amended) The apparatus of Claim 1, ~~further comprising~~ further comprising:

(a) an expandable member substantially encompassing the light diffusing element; and

(b) an inflation lumen extending between the proximal end of the elongate, flexible body and the expandable member.

10. (Original) The apparatus of Claim 9, wherein the inflation lumen further extends between the distal and proximal ends of the light source array.

11. (Original) The apparatus of Claim 9, wherein the inflation lumen further extends between the elongate, flexible body and the light diffusing element, through any intervening element included in the apparatus.

12. (Original) The apparatus of Claim 1, wherein the light source array comprises reflective elements configured to reflect light emitted by the light source array toward the distal end of the light source array, increasing an intensity of light emitted from the distal end of the light source array.

13.-29. (Canceled)

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30. (Currently Amended) Apparatus for illuminating a portion of a body lumen to which a photoreactive agent has or will be administered, comprising:

(a) an elongate, flexible body having a proximal end, a distal end, and at least one lumen; [[and]]

(b) a light source element disposed adjacent to the distal end of the elongate, flexible body, the light source element being electrically coupled to an electrical lead that is adapted to couple to an external power supply, to enable the light source element to be energized with an electrical current, thereby illuminating at least a portion of the body lumen, the light source element emitting light having a characteristic emission waveband corresponding to a characteristic absorption waveband of the photoreactive agent, the light source element having a proximal end, and a distal end, the distal end of the light source element facing toward the distal end of the elongate, flexible body;

(c) a light diffusing element having a proximal end and a distal end, the proximal end of the light diffusing element facing toward the distal end of the light source element, so that light emitted from the light source element is diffused and directed outwardly away from the light diffusing element; and

(d) an optical fiber having a proximal end, and a distal end, the proximal end of the optical fiber facing toward the distal end of the light source element, and the distal end of the optical fiber facing toward the proximal end of the light diffusing element, the optical fiber directing light from the light source element to the light diffusing element.

31. (Original) The apparatus of Claim 30, wherein the light source element includes a plurality of light sources.

32. (Original) The apparatus of Claim 31, wherein the plurality of light sources are each light emitting devices.

33. (Original) The apparatus of Claim 31, wherein the plurality of light sources are configured in a radial array.

34.-35. (Canceled)

36. (Original) The apparatus of Claim 31, wherein the plurality of light sources include at least one first type of light source emitting light of a first wavelength, and a second type of light source emitting light of a second wavelength.

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37. (Original) The apparatus of Claim 30, further comprising at least one light sensor.

38.-41. (Canceled)

42. (Currently Amended) The apparatus of ~~Claim 41~~ Claim 30, further comprising:

(a) an expandable member substantially encompassing the light diffusing element; and

(b) an inflation lumen extending between the proximal end of the elongate, flexible body and the expandable member, in fluid communication with a volume encompassed by the expandable member.

43. (Canceled)

44. (Currently Amended) The apparatus of ~~Claim 43~~ Claim 30, wherein the optical fiber is tapered, such that the distal end of the optical fiber has a smaller cross-section than the proximal end of the optical fiber.

45. (Currently Amended) The apparatus of ~~Claim 41~~ Claim 30, further comprising an optical element having a proximal side, and a distal side, the proximal side of the optical element facing toward the distal end of the light source element, said optical element focusing light emitted from the light source element.

46. (Canceled)

47. (Currently Amended) The apparatus of ~~Claim 40~~ Claim 30, further comprising:

(a) an expandable member substantially encompassing the light source element; and

(b) an inflation lumen extending between the proximal end of the elongate, flexible body and the expandable member, in fluid communication with a volume encompassed by the expandable member.

48.-58. (Canceled)

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59. (New) Apparatus for illuminating a portion of a body lumen to which a photoreactive agent has been or will be administered, comprising:

(a) an elongate, flexible body having a proximal end, a distal end, and at least one lumen extending therebetween;

(b) a light source array having a proximal end, and a distal end, the light source array emitting light directed toward the distal end of the elongate, flexible body, said light having a characteristic emission waveband, where the characteristic emission waveband corresponds to a characteristic absorption waveband of the photoreactive agent, the light source array being disposed adjacent to the distal end of the elongate, flexible body;

(c) an electrical lead having a proximal end adapted to be electrically coupled to an external power supply, and a distal end electrically coupled to the light source array, thereby enabling the light source array to be energized with an electrical current when the proximal end of the electrical lead is electrically coupled to the external power supply;

(d) an optical element having a proximal side, and a distal side, the proximal side of the optical element facing toward the distal end of the light source element, said optical element focusing light emitted from the light source element; and

(e) a light diffusing element having a proximal end, and a distal end, the proximal end of the light diffusing element being oriented in a facing relationship with the distal end of the light source array, such that light emitted from the light source array and focused by the optical element is diffused and directed outwardly away from the light diffusing element.

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60. (New) Apparatus for illuminating a portion of a body lumen to which a photoreactive agent has or will be administered, comprising:

(a) an elongate, flexible body having a proximal end, a distal end, and at least one lumen;

(b) a light source element disposed adjacent to the distal end of the elongate, flexible body, the light source element being electrically coupled to an electrical lead that is adapted to couple to an external power supply, to enable the light source element to be energized with an electrical current, thereby illuminating at least a portion of the body lumen, the light source element emitting light having a characteristic emission waveband corresponding to a characteristic absorption waveband of the photoreactive agent, the light source element having a proximal end, and a distal end, the distal end of the light source element facing toward the distal end of the elongate, flexible body;

(c) an optical element having a proximal side, and a distal side, the proximal side of the optical element facing toward the distal end of the light source element, said optical element focusing light emitted from the light source element; and

(d) a light diffusing element having a proximal end, and a distal end, the proximal end of the light diffusing element facing toward the distal end of the light source element, so that light emitted from the light source element is diffused and directed outwardly away from the light diffusing element.

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